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<110> Allen, Steve
Hitz, Bill
Kinney, Tony
Tingey, Scott

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Ala Val Thr Leu Val Pro Leu Tyr Ile Ser Glu Thr Ala Pro His Arg
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 Thr Lys Ser
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0212* PRT
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0400* 6

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0212* DNA

0213* Glycine max

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44008 8

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			165						170					175	
Ala	Leu	Thr	Ile	Phe	Phe	Leu	Pro	Glu	Ser	Pro	Arg	Trp	Leu	Val	Ser
			180					185					190		
Lys	Gly	Arg	Met	Leu	Glu	Ala	Lys	Lys	Val	Leu	Gln	Arg	Leu	Arg	Gly
		195					200					205			
Arg	Gln	Asp	Val	Ser	Gly	Gln	Met	Ala	Leu	Leu	Val	Gln	Gly	Leu	Gly
	210					215									
Ile	Gly	Gly	Asp	Thr	Ser	Ile	Gln	Gln	Tyr	Ile	Ile	Gly	Pro	Ala	Asp
	225					230				235				240	

Asp	Val	Ala	Asp	Gly	His	Glu	His	Ala	Thr	Glu	Lys	Asp	Lys	Ile	Arg
				245					250					255	
Leu	Tyr	Gly	Ser	Gln	Ala	Gly	Leu	Ser	Trp	Leu	Ser	Lys	Pro	Val	Thr
			260					265					270		
Gly	Gln	Ser	Ser	Ile	Gly	Leu	Ala	Ser	His	His	Gly	Ser	Ile	Ile	Asn
		275					280					285			
Gln	Ser	Met	Pro	Leu	Met	Asp	Pro	Leu	Val	Thr	Leu	Phe	Gly	Ser	Ile
	290					295					300				
His	Glu	Lys	Leu	Pro	Glu	Thr	Gly	Ala	Arg	Gly	Ser	Met	Arg	Ser	Thr
305					310					315					320
Leu	Phe	Pro	Asn	Phe	Gly	Ser	Met	Phe	Ser	Thr	Ala	Glu	Pro	His	Ala
				325					330					335	
Lys	Ile	Glu	Gln	Trp	Asp	Glu	Glu	Ser	Leu	Gln	Arg	Glu	Arg	Glu	Asp
			340					345					350		
Tyr	Met	Ser	Asp	Ala	Thr	Arg	Gly	Asp	Ser	Asp	Asp	Asn	Leu	His	Ser
		355					360					365			
Pro	Leu	Ile	Ser	Arg	Gln	Thr	Thr	Ser	Leu	Glu	Lys	Asp	Leu	Pro	Pro
	370					375					380				
Pro	Pro	Ser	His	Gly	Ser	Ile	Leu	Gly	Ser	Met	Arg	Arg	His	Ser	Ser
385					390					395					400
Leu	Met	Gln	Gly	Ser	Gly	Glu	Gln	Gly	Gly	Ser	Thr	Gly	Ile	Gly	Gly
				405					410					415	
Gly	Trp	Gln	Leu	Ala	Trp	Lys	Trp	Thr	Asp	Lys	Gly	Glu	Asp	Gly	Lys
			420					425					430		
Gln	Gln	Gly	Gly	Phe	Lys	Arg	Ile	Tyr	Leu	His	Glu	Glu	Gly	Val	Ser
		435					440					445			
Ala	Ser	Arg	Arg	Gly	Ser	Ile	Val	Ser	Ile	Pro	Gly	Glu	Gly	Glu	Phe
	450					455					460				
Val	Gln	Ala	Ala	Ala	Leu	Val	Ser	Gln	Pro	Ala	Leu	Tyr	Ser	Lys	Glu
465					470					475					480
Leu	Ile	Asp	Gly	His	Pro	Val	Gly	Pro	Ala	Met	Val	His	Pro	Ser	Glu
				485				490						495	
Thr	Ala	Ser	Lys	Gly	Pro	Ser	Trp	Lys	Ala	Leu	Leu	Glu	Pro	Gly	Val
		500						505					510		
Lys	His	Ala	Leu	Val	Val	Gly	Val	Gly	Ile	Gln	Ile	Leu	Gln	Gln	Phe
		515					520					525			
Ser	Gly	Ile	Asn	Gly	Val	Leu	Tyr	Tyr	Thr	Pro	Gln	Ile	Leu	Glu	Glu
	530					535					540				
Ala	Gly	Val	Glu	Val	Leu	Leu	Ser	Asp	Ile	Gly	Ile	Gly	Ser	Glu	Ser
545					550					555					560
Ala	Ser	Phe	Leu	Ile	Ser	Ala	Phe	Thr	Thr	Phe	Leu	Met	Leu	Pro	Cys
				565					570					575	
Ile	Gly	Val	Ala	Met	Lys	Leu	Met	Asp	Val	Ser	Gly	Arg	Arg	Gln	Leu
			580					585					590		

Leu Leu Thr Thr Ile Pro Val Leu Ile Val Ser Leu Ile Ile Leu Val
595 600 605

Ile Gly Ser Leu Val Asn Phe Gly Asn Val Ala His Ala Ala Ile Ser
610 615 620

Thr Val Cys Val Val Val Tyr Phe Cys Cys Phe Val Met Gly Tyr Gly
625 630 635 640

Pro Ile Pro Asn Ile Leu Cys Ser Glu Ile Phe Pro Thr Arg Val Arg
645 650 655

Gly Leu Cys Ile Ala Ile Cys Ala Leu Val Phe Trp Ile Gly Asp Ile
660 665 670

Ile Ile Thr Tyr Ser Leu Pro Val Met Leu Gly Ser Leu Gly Leu Gly
675 680 685

Gly Val Phe Ala Ile Tyr Ala Val Val Cys Phe Ile Ser Trp Ile Phe
690 695 700

Val Phe Leu Lys Val Pro Glu Thr Lys Gly Met Pro Leu Glu Val Ile
705 710 715 720

Ser Glu Phe Phe Ser Val Gly Ala Lys Gln Ala Ala Ser Ala Lys Asn
725 730 735

Glu

<210> 9
<211> 1692
<212> DNA
<213> Glycine max

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gaagcatggc aaatccaagc agtctagtggt accctctagt gacctctttt ggtagtgtac 180
atgagaagct cccagaaaaca ggaagcacc cttttccaca ctttgggagt atgttcagtg 240
ttggggggaaa tcagccaagg aatgaagatt gggatgagga aagcctagcc agagaggggtg 300
atgattatgt ctctgatgct ggtgattctg atgacaattt gcagagtcca ttgatctcac 360
gtcaaaacaac gagtctggat aaggacatac ctctcatgc ccatagtaac cttgcaagca 420
tgaggccaagg tagtctctta catggaaatt caggagaacc cactggtagt actgggattg 480
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ttgtgggttct actccctggc ggtgatttac caactgacag tgaggttgta caggctgctg 660
ctctgggtgag tcagcctgac ctttataatg aggaccttat ggttcaacgg ccagttggac 720
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aacctgggggt gaagcatgca ttgattgtgg ggggtgggaat gaaattctt cagcagttct 840
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aaaggactct gctgctcagt acaatctcag tcccaataga aatctctctc atattagttc 1080
tgggaagtct tttggatttg ggatcactg caaatgcac aaatccaacc attagtgtta 1140
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ggtaacctct aactattttt aactctaccc tttttgaaat ttttccctct tttaaaaatt 1560
tattttctat ttattctctc tttctcgttg gttgagattg agaaaaaga aactttgttt 1620
ctgtaaaagaa aaatgttcat tttctgggtc attctatgga cttctatata ttcctaaaaa 1680
aaaaaaaaaa aa 1692

<210> 10
 <211> 436
 <212> PBT
 <213> Glycine max

<400> 15

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Gly	Gln	Ser	Trp	Val	Ala	Arg	Pro	Val	Ala	Gly	Pro	Asn	Ser	Val	Gly
			20					25					30		
Leu	Val	Ser	Arg	Lys	Gly	Ser	Met	Ala	Asn	Pro	Ser	Ser	Leu	Val	Asp
		35					40					45			
Pro	Leu	Val	Thr	Leu	Phe	Gly	Ser	Val	His	Glu	Lys	Leu	Pro	Glu	Thr
	50					55					60				
Gly	Ser	Thr	Leu	Phe	Pro	His	Phe	Gly	Ser	Met	Phe	Ser	Val	Gly	Gly
65					70					75				80	
Asn	Gln	Pro	Arg	Asn	Glu	Asp	Trp	Asp	Glu	Glu	Ser	Leu	Ala	Arg	Glu
				85					90					95	
Gly	Asp	Asp	Tyr	Val	Ser	Asp	Ala	Gly	Asp	Ser	Asp	Asp	Asn	Leu	Gln
			100					105					110		
Ser	Pro	Leu	Ile	Ser	Arg	Gln	Thr	Thr	Ser	Leu	Asp	Lys	Asp	Ile	Pro
		115					120					125			
Pro	His	Ala	His	Ser	Asn	Leu	Ala	Ser	Met	Arg	Gln	Gly	Ser	Leu	Leu
	130					135					140				
His	Gly	Asn	Ser	Gly	Glu	Pro	Thr	Gly	Ser	Thr	Gly	Ile	Gly	Gly	Gly
145					150					155				160	
Trp	Gln	Leu	Ala	Trp	Lys	Trp	Ser	Glu	Arg	Glu	Gly	Pro	Asp	Gly	Lys
				165					170					175	
Lys	Glu	Gly	Gly	Phe	Lys	Arg	Ile	Tyr	Leu	His	Gln	Asp	Gly	Gly	Ser
			180					185					190		
Gly	Ser	Arg	Arg	Gly	Ser	Val	Val	Ser	Leu	Pro	Gly	Gly	Asp	Leu	Pro
		195					200					205			
Thr	Asp	Ser	Glu	Val	Val	Gln	Ala	Ala	Ala	Leu	Val	Ser	Gln	Pro	Ala
	210					215					220				
Leu	Tyr	Asn	Glu	Asp	Leu	Met	Arg	Gln	Arg	Pro	Val	Gly	Pro	Ala	Met
225					230					235				240	
Ile	His	Pro	Ser	Glu	Thr	Ile	Ala	Lys	Gly	Pro	Ser	Trp	Ser	Asp	Leu
				245					250					255	
Phe	Glu	Pro	Gly	Val	Lys	His	Ala	Leu	Ile	Val	Gly	Val	Gly	Met	Gln
			260					265					270		
Ile	Leu	Gln	Gln	Phe	Ser	Gly	Ile	Asn	Gly	Val	Leu	Tyr	Tyr	Thr	Pro
		275					280					285			
Gln	Ile	Leu	Gln	Gln	Ala	Gly	Val	Gly	Tyr	Leu	Leu	Ser	Ser	Leu	Gly
						290									
Leu	Gly	Ser	Thr	Ser	Ser	Ser	Phe	Leu	Ile	Ser	Ala	Val	Thr	Thr	Leu
305					310					315					320

Leu Met Leu Pro Cys Ile Ala Ile Ala Met Arg Leu Met Asp Ile Ser
 325 330 335
 Gly Arg Arg Thr Leu Leu Leu Ser Thr Ile Pro Val Leu Ile Ala Ala
 340 345 350
 Leu Leu Ile Leu Val Leu Gly Ser Leu Val Asp Leu Gly Ser Thr Ala
 355 360 365
 Asn Ala Ser Ile Ser Thr Ile Ser Val Ile Val Tyr Phe Cys Phe Phe
 370 375 380
 Val Met Gly Phe Gly Pro Ile Pro Asn Ile Leu Cys Ala Glu Ile Phe
 385 390 395 400
 Pro Thr Arg Val Arg Gly Leu Cys Ile Ala Ile Cys Ala Leu Thr Phe
 405 410 415
 Trp Ile Cys Asp Ile Ile Val Thr Tyr Thr Leu Pro Val Met Leu Asn
 420 425 430
 Ser Val Gly Leu Ala Gly Val Phe Gly Ile Tyr Ala Val Val Cys Phe
 435 440 445
 Ile Ala Trp Val Phe Val Phe Leu Lys Val Pro Glu Thr Lys Gly Met
 450 455 460
 Pro Leu Glu Val Ile Ile Glu Phe Phe Ser Val Gly Ala Lys Gln Phe
 465 470 475 480
 Asp Asp Ala Lys His Asn
 485

<210> 11
 <211> 510
 <212> DNA
 <213> Triticum aestivum

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 gtttctccat ctcatctcct tgggttggttc tctactagag aggggcagct gcagggatcc 180
 ttgggtggaga ggaggggaaga agatgtcggg tgcctgcactg gtgcgcattg cgggttccat 240
 tggcaatctg ctgcaggggt gggacaatgc caccatcgtt ggtgctgttc tgtacatcaa 300
 gaaggaattc cagctcgaaa ataatccgac tgtggagggg ctcatcgtgg catgtcctca 360
 tgggttgcaa catcatcaca cattctccgg gccagtatca aactgggttg ccgggccccta 420
 ngccatctcc ttgnttttcaa ntcccaaggg ctaatcanct aggcaccaat gtcaatgtgc 480
 gncccggaac ctntcaangg ttggaacgtt 510

<210> 12
 <211> 117
 <212> PRT
 <213> Triticum aestivum

<400> 12
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 1 5 10 15
 Arg Arg Leu Arg Ser Val Leu Ile Tyr Arg Thr Thr Pro Pro His His
 20 25 30
 Thr Arg Gly Leu Pro Leu Leu Gly Leu Leu His Leu Ile Ser Leu Val
 35 40 45
 Gly Ser Leu Leu Glu Arg Arg Ser Cys Arg Asp Pro Trp Trp Arg Gly
 50 55 60
 Gly Lys Lys Met Ser Gly Ala Ala Leu Val Ala Ile Ala Ala Ser Ile
 65 70 75 80
 Gly Asn Leu Leu Gln Gly Trp Asp Asn Ala Thr Ile Ala Gly Ala Val
 85 90 95
 Leu Tyr Ile Lys Lys Glu Phe Gln Leu Glu Asn Asn Pro Thr Val Glu
 100 105 110
 Gly Leu Ile Val Ala
 115

<210> 13
 <211> 1487
 <212> DNA
 <213> Triticum aestivum

<400> 13
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 gaattctact gcacaaagag ggggtggcgg actcaagaag ggtctctgtt gtttccacttc 180
 ctgggtggggg tgatggcaag caagggggga gtgggtttat catgtctgtt gctttggtaa 240
 ggcactcgac tctttactcc aaggatctta tgggaagagc tatggggccc ggtccagcca 300
 tgattcctcc attggaggca gctcccaaaag gttcaatctg aaagatctg tttgaacctg 360
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 atctcatgcc cccatttcat cgtctattat tgcttattag tactgtactg taatcgtcat 1260
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 aaataaagaa aaagcatgtt tttttttgtg tcaacttgca aactttcttt taaacattgt 1380
 gcaatgtatt gtaaatttct ttatcaactt ccttcgattc agagagaagc acttgtttgt 1440
 aagtcatgaa agatttttct cgacaaaaaa aaaaaaaaaa aaaaaaaa 1487

0210. 14
 0211. 345
 0212. PRT
 0213. Triticum aestivum

0400. 14
 Ser Trp Lys Glu Gly Gly Glu Ala Val Ser Ser Thr Gly Ile Gly Gly
 1 5 10 15
 Gly Trp Gln Leu Ala Trp Lys Trp Ser Glu Arg Gln Gly Glu Asp Gly
 20 25 30
 Lys Lys Glu Gly Gly Phe Lys Arg Ile Tyr Leu His Gln Glu Gly Val
 35 40 45
 Ala Asp Ser Arg Arg Gly Ser Val Val Ser Leu Pro Gly Gly Gly Asp
 50 55 60
 Ala Thr Gln Gly Gly Ser Gly Phe Ile His Ala Ala Ala Leu Val Ser
 65 70 75 80
 His Ser Ala Leu Tyr Ser Lys Asp Leu Met Glu Glu Arg Met Ala Ala
 85 90 95
 Gly Pro Ala Met Ile His Pro Leu Glu Ala Ala Pro Lys Gly Ser Ile
 100 105 110
 Trp Lys Asp Leu Phe Glu Pro Gly Val Arg Arg Ala Leu Phe Val Gly
 115 120 125
 Val Gly Ile Gln Met Leu Gln Gln Phe Ala Gly Ile Asn Gly Val Leu
 130 135 140
 Tyr Tyr Thr Pro Gln Ile Leu Glu Gln Ala Gly Val Ala Val Leu Leu
 145 150 155 160
 Ser Asn Leu Gly Leu Ser Ser Ala Ser Ala Ser Ile Leu Ile Ser Ser
 165 170 175
 Leu Thr Thr Leu Leu Met Leu Pro Ser Ile Gly Val Ala Met Arg Leu
 180 185 190
 Met Asp Ile Ser Gly Arg Arg Phe Leu Leu Leu Gly Thr Ile Pro Ile
 195 200 205
 Leu Ile Ala Ser Leu Ile Val Leu Gly Val Val Asn Val Ile Asn Leu
 210 215 220
 Ser Thr Val Pro His Ala Val Leu Ser Thr Val Ser Val Ile Val Tyr
 225 230 235 240
 Phe Cys Cys Phe Val Met Gly Phe Gly Pro Ile Pro Asn Ile Leu Cys
 245 250 255
 Ala Glu Ile Phe Pro Thr Arg Val Arg Gly Val Cys Ile Ala Ile Cys
 260 265 270

Ala Leu Thr Phe Trp Ile Cys Asp Ile Ile Val Thr Tyr Ser Leu Pro
 275 280 285

Val Met Leu Asn Ala Ile Gly Leu Ala Gly Val Phe Gly Ile Tyr Ala
 290 295 300

Val Val Cys Cys Ile Ala Phe Val Phe Val Tyr Leu Lys Val Pro Glu
 305 310 315 320

Thr Lys Gly Met Pro Leu Glu Val Ile Thr Glu Phe Phe Ala Val Gly
 325 330 335

Ala Lys Gln Ala Gln Ala Thr Ile Ala
 340 345

0210. 15
 0211. 1009
 0212. DNA
 0213. Triticum aestivum

0400. 15
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 tgggggtatc aatggagtcc totactaac acctcagata cttgagcaag caggtgtcgg 120
 ggttcttcta tcaaacattg gactaagtc ttctcagca tctattctta ttagtgccct 180
 gacaaccttg ctgatgcttc ccagcattgg catcgccatg agactcatgg atatgtcagg 240
 aagaagggtt cttctccttt caacaatccc tgtcttgata gtagecctag ctgtcttggt 300
 tttagtgaat gttctggatg tgggaacct ggtgcacgt ggcctctcaa cgcacagcgt 360
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 tggagtcttc ggcataatg ccctcgtttg tgtactagcc tttgtattcg tctacatgaa 600
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 gtaattttgt ggtgtcataa ctactactac actggttaac ctgcgatgct ttggtgaaga 780
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 tgcattatgt gtttgcttaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1009

0210. 16
 0211. 228
 0212. PRT
 0213. Triticum aestivum

0400. 16
 Glu Pro Gly Val Lys His Ala Leu Phe Val Gly Ile Gly Leu Gln Ile
 1 5 10 15

Leu Gln Gln Phe Ala Gly Ile Asn Gly Val Leu Tyr Tyr Thr Pro Gln
 20 25 30

Ile Leu Glu Gln Ala Gly Val Gly Val Leu Leu Ser Asn Ile Gly Leu
 35 40 45

Ser Ser Ser Ser Ala Ser Ile Leu Ile Ser Ala Leu Thr Thr Leu Leu
 50 55

Met Leu Pro Ser Ile Gly Ile Ala Met Arg Leu Met Asp Met Ser Gly
 60 65 70 75 80

Arg Arg Phe Leu Leu Leu Ser Thr Ile Pro Val Leu Ile Val Ala Leu
 85 90 95

Ala Val Leu Val Leu Val Asn Val Leu Asp Val Gly Thr Met Val His
 100 105 110

Ala Ala Leu Ser Thr Ile Ser Val Ile Val Tyr Phe Cys Phe Phe Val
115 120 125

Met Gly Phe Gly Pro Ile Pro Asn Ile Leu Cys Ala Glu Ile Phe Pro
130 135 140

Thr Ser Val Arg Gly Ile Cys Ile Ala Ile Cys Ala Leu Thr Phe Trp
145 150 155 160

Ile Gly Asp Ile Ile Val Thr Tyr Thr Leu Pro Val Met Leu Asn Ala
165 170 175

Ile Gly Leu Ala Gly Val Phe Gly Ile Tyr Ala Ile Val Cys Val Leu
180 185 190

Ala Phe Val Phe Val Tyr Met Lys Val Pro Glu Thr Lys Gly Met Pro
195 200 205

Leu Glu Val Ile Thr Glu Phe Phe Ser Val Gly Ala Lys Gln Gly Lys
210 215 220

Glu Ala Thr Asp
225

<210> 17
<211> 615
<212> DNA
<213> Zea mays

<220>
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<222> (149)

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agggaaagtc aagttcgctt ttgcttgctt catctcttca tcaatgaatt ccatcctttt 180
tgccttatgat atcggagcta ttgaggggga gtcgttgtta atcagaaagg aactgaaaat 240

cagcgacgtg aagctggaga tectgatggg natectcaac gtgtactcgc teatcggtc 300
 gttngcgga gggcggaagt ccgactggat cggncgcgt acaccatcgt gttecgngcg 350
 gtgatcttct tgcggggggt ttectcatgg gcttcgcgt gaactactgg atgctcatgt 420
 tccggcgctt cgtggcgggg atcggcggtg gctacgcgt catgatcgca accgtntaca 480
 cggcggaagt gtcccgcat cggcccgcggt cttectgaag tccgtcccggt aggtgttcat 540
 caattcgga tectctaggt acgtgtcaat aaggcttttc cgttcgcgt cgctggatng 600
 cnataatgtc ggcgt 615

4210 18
 4211 167
 4212 PRT
 4213 Zea mays

4220
 4221 UNSURE
 4222 (34)

4230
 4231 UNSURE
 4232 (85)

4240
 4241 UNSURE
 4242 (98)

4250
 4251 UNSURE
 4252 (112)

4260
 4261 UNSURE
 4262 (151)

4400 18
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 1 5 10 15
 Ala Ala Ile Glu Pro Gly Lys Lys Gly Asn Val Lys Phe Ala Phe Ala
 20 25 30
 Cys Xaa Ile Leu Ala Ser Met Thr Ser Ile Leu Leu Gly Tyr Asp Ile
 35 40 45
 Gly Val Met Ser Gly Ala Ser Leu Tyr Ile Lys Lys Asp Leu Lys Ile
 50 55 60
 Ser Asp Val Lys Leu Glu Ile Leu Met Gly Ile Leu Asn Val Tyr Ser
 65 70 75 80
 Leu Ile Gly Ser Xaa Ala Ala Gly Arg Thr Ser Asp Trp Ile Gly Arg
 85 90 95
 Arg Xaa Thr Ile Val Phe Ala Ala Val Ile Phe Phe Ala Gly Ala Xaa
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 Leu Met Gly Phe Ala Val Asn Tyr Trp Met Leu Met Phe Gly Arg Phe
 115 120 125
 Val Ala Gly Ile Gly Val Gly Tyr Ala Leu Met Ile Ala Thr Val Tyr
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 Thr Ala Glu Val Ser Phe Xaa Ser Ala Arg Gly Phe Leu Thr Ser Phe
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 Pro Glu Val Phe Ile Thr Ser
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4210 * 19
 4211 * 1914
 4212 * DNA
 4213 * Sea mays

4401 * 19
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4210 * 20
 4211 * 513
 4212 * PRT
 4213 * Sea mays

4400 * 20
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 Val Ile Leu Gly Tyr Asp Ile Gly Val Met Ser Gly Ala Ala Met Tyr
 35 40 45
 Ile Lys Lys Asp Leu Asn Ile Thr Asp Val Gln Leu Ala Ile Leu Ile
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 Gly Ile Leu Ser Leu Tyr Ser Leu Ile Gly Ser Phe Ala Gly Ala Arg
 65 70 75 80
 Thr Ser Asp Arg Ile Gly Arg Arg Leu Thr Val Val Phe Ala Ala Val
 85 90 95
 Ile Phe Phe Val Gly Ser Leu Leu Met Gly Phe Ala Val Asn Tyr Gly
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Met	Leu	Met	Ala	Gly	Arg	Phe	Val	Ala	Gly	Val	Gly	Val	Gly	Tyr	Gly			
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Ala	Gly	Ile	Pro	Lys	Gly	Leu	Asp	Gly	Asp	Val	Val	Thr	Val	Pro	Gly			
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Ser	Pro	Thr	Pro	Ala	Val	Arg	Arg	Ile	Leu	Leu	Ser	Ala	Val	Gly	Leu			
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His	Phe	Phe	Gln	Gln	Ala	Ser	Gly	Ser	Asp	Ser	Val	Val	Gln	Tyr	Ser			
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Ala	Arg	Leu	Phe	Lys	Ser	Ala	Gly	Ile	Thr	Asp	Asp	Asn	Lys	Leu	Leu			
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Gly	Val	Thr	Cys	Ala	Val	Gly	Val	Thr	Lys	Thr	Phe	Phe	Ile	Leu	Val			
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Ala	Thr	Phe	Leu	Leu	Asp	Arg	Ala	Gly	Arg	Arg	Pro	Leu	Leu	Leu	Ile			
			340					345					350					
Ser	Thr	Gly	Gly	Met	Ile	Val	Ser	Leu	Ile	Cys	Leu	Gly	Ser	Gly	Leu			
		355					360					365						
Thr	Val	Ala	Gly	His	His	Pro	Asp	Thr	Lys	Val	Ala	Trp	Ala	Val	Ala			
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Leu	Gly	Pro	Ile	Thr	Gly	Val	Tyr	Thr	Ser	Glu	Ile	Phe	Pro	Leu	Gln			
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Val	Arg	Ala	Leu	Gly	Phe	Ala	Val	Gly	Val	Ala	Ser	Asn	Arg	Val	Thr			
			420					425					430					
Ser	Ala	Val	Ile	Ser	Met	Thr	Phe	Leu	Ser	Leu	Ser	Lys	Ala	Ile	Thr			
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Ile	Gly	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Gly	Ile	Ala	Ala	Val	Ala	Trp			
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Val Phe Phe Phe Thr Cys Leu Pro Glu Thr Arg Gly Arg Thr Leu Glu
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Glu Met Gly Lys Leu Phe Gly Met Pro Asp Thr Gly Met Ala Glu Glu
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Ala Glu Asp Ala Ala Ala Lys Glu Lys Val Val Glu Leu Pro Ser Ser
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Lys

<210> 21
<211> 2017
<212> CNA
<213> Oryza sativa

<400> 21
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<210> 22
<211> 510
<212> PRT
<213> Oryza sativa

<220>
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<222> 102,

<400> 21
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Gly	Ile	Leu	Asn	Leu	Tyr	Ser	Leu	Ile	Gly	Ser	Phe	Ala	Ala	Gly	Arg
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Thr	Ser	Asp	Trp	Ile	Gly	Arg	Arg	Tyr	Thr	Ile	Val	Phe	Ala	Ala	Val
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Ile	Phe	Phe	Ala	Gly	Xaa	Phe	Leu	Met	Gly	Phe	Ala	Val	Asn	Tyr	Ala
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Leu	Met	Ile	Ala	Pro	Val	Tyr	Thr	Ala	Glu	Val	Ser	Pro	Ala	Ser	Ala
	130					135					140				
Arg	Gly	Phe	Leu	Thr	Ser	Phe	Pro	Glu	Val	Phe	Ile	Asn	Phe	Gly	Ile
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Leu	Leu	Gly	Tyr	Val	Ser	Asn	Tyr	Ala	Phe	Ser	Arg	Leu	Pro	Leu	Asn
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Leu	Gly	Trp	Arg	Ile	Met	Leu	Gly	Ile	Gly	Ala	Ala	Pro	Ser	Val	Leu
			180					185						190	
Leu	Ala	Leu	Met	Val	Leu	Gly	Met	Pro	Glu	Ser	Pro	Arg	Trp	Leu	Val
		195					200					205			
Met	Lys	Gly	Arg	Leu	Ala	Asp	Ala	Lys	Val	Val	Leu	Glu	Lys	Thr	Ser
	210					215					220				
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225					230					235					240
Ala	Gly	Ile	Pro	Glu	Glu	Leu	Asp	Gly	Asp	Val	Val	Thr	Val	Pro	Lys
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Arg	Gly	Ser	Gly	Asn	Glu	Lys	Arg	Val	Trp	Lys	Glu	Leu	Ile	Leu	Ser
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Pro	Thr	Pro	Ala	Met	Arg	Arg	Ile	Leu	Leu	Ser	Gly	Ile	Gly	Ile	His
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Phe	Phe	Gln	His	Ala	Leu	Gly	Ile	His	Ser	Val	Val	Phe	Tyr	Ser	Pro
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Thr	Thr	Trp	Pro	Phe	Gly	Val	Thr	Lys	Arg	Leu	Ile	Ile	Leu	Leu	Ala
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Val Val Gly Gln His Pro Asp Ala Lys Ile Pro Trp Ala Ile Gly Leu
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Ser Ile Ala Ser Thr Leu Ala Tyr Val Ala Phe Phe Ser Ile Gly Leu
385 390 395 400

Gly Pro Ile Thr Trp Val Tyr Ser Ser Glu Ile Phe Pro Leu Gln Val
405 410 415

Arg Ala Leu Gly Cys Ser Leu Gly Val Ala Ala Asn Arg Val Thr Ser
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Gly Val Ile Ser Met Thr Phe Leu Ser Leu Ser Lys Ala Ile Thr Ile
435 440 445

Gly Gly Ser Phe Phe Leu Tyr Ser Gly Ile Ala Ala Leu Ala Trp Val
450 455 460

Phe Phe Tyr Thr Tyr Leu Pro Glu Thr Arg Gly Arg Thr Leu Glu Glu
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Met Ser Lys Leu Phe Gly Asp Thr Ala Ala Ala Ser Glu Ser Asp Glu
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Pro Ala Lys Glu Lys Lys Lys Val Glu Met Ala Ala Thr Asn
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<210> 23

<211> 1853

<212> DNA

<213> Glycine max

<400> 23

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<400> 24

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Ala	Cys	Ala	Met	Leu	Ala	Ser	Met	Thr	Ser	Ile	Leu	Leu	Gly	Tyr	Asp
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Ile	Gly	Val	Met	Ser	Gly	Ala	Ala	Ile	Tyr	Ile	Lys	Arg	Asp	Leu	Lys
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Val	Ser	Asp	Glu	Gln	Ile	Glu	Ile	Leu	Leu	Gly	Ile	Ile	Asn	Leu	Tyr
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Ser	Leu	Ile	Gly	Ser	Cys	Leu	Ala	Gly	Arg	Thr	Ser	Asp	Trp	Ile	Gly
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Pro	Arg	Tyr	Thr	Ile	Val	Phe	Ala	Gly	Thr	Ile	Phe	Phe	Val	Gly	Ala
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Phe	Val	Ala	Gly	Ile	Gly	Ile	Gly	Tyr	Ala	Leu	Met	Ile	Ala	Pro	Val
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Gln	Leu	Arg	Leu	Ala	Glu	Ile	Lys	Gln	Ala	Ala	Gly	Ile	Pro	Glu	Ser
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Cys	Asn	Asp	Asp	Val	Val	Gln	Val	Asn	Lys	Gln	Ser	Asn	Gly	Glu	Gly
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	275						280					285			
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 Arg Arg Pro Leu Leu Leu Ser Ser Val Gly Gly Met Val Leu Ser Leu
 355 360 365
 Leu Thr Leu Ala Ile Ser Leu Thr Val Ile Asp His Ser Glu Arg Lys
 370 375 380
 Leu Met Trp Ala Val Gly Ser Ser Ile Ala Met Val Leu Ala Tyr Val
 385 390 395 400
 Ala Thr Phe Ser Ile Gly Ala Gly Pro Ile Thr Trp Val Tyr Ser Ser
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 Ala Val Asn Arg Thr Thr Ser Ala Val Val Ser Met Thr Phe Leu Ser
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 Arg Gly Lys Thr Leu Glu Asp Met Glu Gly Ser Phe Gly Thr Phe Arg
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<213> Triticum aestivum

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Gly Val Met Ser Gly Ala Ser Leu Tyr Ile Gln Lys Asp Leu Lys Ile
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Val Ala Gly Ile Gly Val Gly Tyr Ala Leu Met Ile Ala Pro Val Asn
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Thr Gly Glu Val Ser Pro Ala Ser Ala Arg Gly Val Leu Thr Ser Phe
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Lys Arg Val Leu Lys Asp Leu Ile Leu Ser Pro Thr Ile Ala Met Arg
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His Ile Leu Ile Ala Gly Ile Gly Ile His Phe Phe Gln Gln Ser Ser
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Gly Ile Asp Ala Val Val Leu Tyr Ser Pro Leu Val Phe Lys Ser Ala
325 330 335

Gly Ile Thr Gly Asp Ser Arg Leu Arg Gly Thr Thr Val Ala Val Gly
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Ala Thr Asn Thr Val Phe Ile Leu Val Ala Thr Phe Leu Leu Asp Arg
355 360 365

Ile Arg Arg Arg Pro Leu Val Leu Thr Ser Thr Gly Gly Met Leu Val
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Ser Leu Val Gly Leu Ala Thr Gly Leu Thr Val Ile Ser Arg His Pro
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Asp Glu Lys Ile Thr Trp Ala Ile Val Leu Cys Ile Phe Cys Ile Met
405 410 415

Ala Tyr Val Ala Phe Phe Ser Ile Gly Leu Gly Pro Ile Thr Trp Val
420 425 430

Tyr Ser Ser Glu Ile Phe Pro Leu His Val Arg Ala Leu Gly Cys Ser
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Leu Gly Val Ala Val Asn Arg Leu Thr Ser Gly Val Ile Ser Met Thr
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Phe Ile Ser Leu Ser Lys Ala Met Thr Ile Gly Gly Ala Phe Phe Leu
465 470 475 480

Phe Ala Gly Ile Ala Ser Phe Ala Trp Val Phe Phe Phe Ala Tyr Leu
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Pro Glu Thr Arg Gly Arg Thr Leu Glu Asp Met Ser Ser Leu Phe Gly
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Asn Thr Ala Thr His Lys Gln Gly Ala Ala Glu Ala Asp Asp Asp Ala
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Gly Glu Lys Lys Val Glu Met Ala Ala Thr Asn
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4210 28
 4211 529
 4212 PRT
 4213 Triticum aestivum

4400 28

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 <212> FRT
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Tyr	Pro	Ser	Asp	His	Gly	Asp	Asp	Ser	Glu	Asp	Asp	Leu	His	Ser	Pro
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Glu	Gly	Phe	Pro	Gly	Ser	Arg	Arg	Gly	Ser	Ile	Val	Ser	Leu	Pro	Gly
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 675 680 685
 Val Cys Cys Ile Ser Trp Val Phe Val Phe Ile Lys Val Pro Glu Thr
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 50 55 60
 Leu Lys Glu Asp Trp His Ile Ser Asp Thr Gln Ile Gly Val Leu Val
 65 70 75 80
 Gly Ile Leu Asn Ile Tyr Cys Leu Phe Gly Ser Phe Ala Ala Gly Arg
 85 90 95
 Thr Ser Asp Trp Ile Gly Arg Arg Tyr Thr Ile Val Leu Ala Gly Ala
 100 105 110
 Ile Phe Phe Val Gly Ala Leu Leu Met Gly Phe Ala Thr Asn Tyr Ala
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 Phe Leu Met Val Gly Arg Phe Val Thr Gly Ile Gly Val Gly Tyr Ala
 130 135 140
 Leu Met Ile Ala Pro Val Tyr Thr Ala Glu Val Ser Pro Ala Ser Ser
 145 150 155 160
 Arg Gly Phe Leu Thr Ser Phe Pro Glu Val Phe Ile Asn Ala Gly Ile
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 Leu Leu Gly Tyr Ile Ser Asn Leu Ala Phe Ser Ser Leu Pro Thr His
 180 185 190
 Leu Ser Trp Arg Phe Met Leu Gly Ile Gly Ala Ile Pro Ser Ile Phe
 195 200 205
 Leu Ala Ile Gly Val Leu Ala Met Pro Glu Ser Pro Arg Trp Leu Val
 210 215 220

Met	Gln	Gly	Arg	Leu	Gly	Asp	Ala	Lys	Lys	Val	Leu	Asn	Arg	Ile	Ser	225	230	235	240
Asp	Ser	Pro	Glu	Glu	Ala	Gln	Leu	Arg	Leu	Ser	Glu	Ile	Lys	Gln	Thr	245	250		255
Ala	Gly	Ile	Pro	Ala	Glu	Cys	Asp	Glu	Asp	Ile	Tyr	Lys	Val	Glu	Lys	260	265		270
Thr	Lys	Ile	Lys	Ser	Gly	Asn	Ala	Val	Trp	Lys	Glu	Leu	Phe	Phe	Asn	275	280		285
Pro	Thr	Pro	Ala	Val	Arg	Arg	Ala	Val	Ile	Ala	Gly	Ile	Gly	Ile	His	290	295		300
Phe	Phe	Gln	Gln	Ala	Ser	Gly	Ile	Asp	Ala	Val	Val	Leu	Tyr	Ser	Pro	305	310	315	320
Arg	Ile	Phe	Gln	Ser	Ala	Gly	Ile	Thr	Asn	Ala	Arg	Lys	Gln	Leu	Leu	325	330		335
Ala	Thr	Val	Ala	Val	Gly	Val	Val	Lys	Thr	Leu	Phe	Ile	Leu	Val	Ala	340	345		350
Thr	Phe	Gln	Leu	Asp	Lys	Tyr	Gly	Arg	Arg	Pro	Leu	Leu	Leu	Thr	Ser	355	360		365
Val	Gly	Gly	Met	Ile	Ile	Ala	Ile	Leu	Thr	Leu	Ala	Met	Ser	Leu	Thr	370	375	380	
Val	Ile	Asp	His	Ser	His	His	Lys	Ile	Thr	Trp	Ala	Ile	Ala	Leu	Cys	385	390	395	400
Ile	Thr	Met	Val	Cys	Ala	Val	Val	Ala	Ser	Phe	Ser	Ile	Gly	Leu	Gly	405	410		415
Pro	Ile	Thr	Trp	Val	Tyr	Ser	Ser	Glu	Val	Phe	Pro	Leu	Arg	Leu	Arg	420	425		430
Ala	Gln	Gly	Thr	Ser	Met	Gly	Val	Ala	Val	Asn	Arg	Val	Val	Ser	Gly	435	440	445	
Val	Ile	Ser	Ile	Phe	Phe	Leu	Pro	Leu	Ser	His	Lys	Ile	Thr	Thr	Gly	450	455	460	
Gly	Ala	Phe	Phe	Leu	Phe	Gly	Gly	Ile	Ala	Ile	Ile	Ala	Trp	Phe	Phe	465	470	475	480
Phe	Leu	Thr	Phe	Leu	Pro	Glu	Thr	Arg	Gly	Arg	Thr	Leu	Leu	Asn	Met	485	490		495
His	Glu	Leu	Phe	Glu	Asp	Phe	Arg	Trp	Arg	Ala	Ser	Ile	Ile	Gly	Asn	500	505	510	
Lys	Ser	Asn	Asn	Asp	Glu	Asn	Ser	Thr	Arg	Lys	Gln	Ser	Asn	Gly	Asn	515	520	525	
Asp	Lys	Ser	Gln	Val	Gln	Leu	Gly	Ala	Thr	Thr	Thr	Ser	Thr	Thr	Val	530	535	540	
Thr	Asn	Asp	Asn	His												545			